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4

D407-667-105TRN
Job Sheet 202845



Part No: D407-667-105TRN Job Qty: 1 pcs

Part Name: Crosstube Turning Detail



Part Weight: 0 lbs Status: New Priority: Medium

Job Created: 11/4/19 Job Tracking No:

Due Date: 11/29/19 Created By: Marie Lajeunesse

Type: Stock Description:

Note: DWG D407-667-145 REV.D IPP Rev:a 08.02.28 new issue EC IPP Rev B 08.04.02 Removed polish EC verified by: DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Lead Time	DAS	Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier				
100	Mori Seiki TL-40 - 1	1 pcs	11/29/19	11/29/19	1.00	1.25	Mori Seiki TL-40 - 1				
110	QC 2	1 pcs	11/29/19	11/29/19	0.00	0.00	QC 2 - 1				
							QC 2 - 12				
							QC 2 - 14				
							QC 2 - 17				
							QC 2 - 19				
							QC 2 - 2				
							QC 2 - 20				
							QC 2 - 22				
							QC 2 - 23				
							QC 2 - 25				
							QC 2 - 32				
							QC 2 - 33				
							QC 2 - 35				
							QC 2 - 39				
							QC 2 - 4				
							QC 2 - 40				
							QC 2 - 44				
							QC 2 - 45				
							QC 2 - 48				
							QC 2 - 49				
							QC 2 - 50				
							QC 2 - 51				
							QC 2 - 52				
							QC 2 - 57				
							QC 2 - 62				
							QC 2 - 63				
							QC 2 - 8				
							QC 2 - 66				
							QC 2 - 64				

				QC 2 - 65	
				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
120	Mori Seiki TL-40 - 1 - B4B	1 pcs	11/29/19	1.00 1.12	Mori Seiki TL-40 - 1 - B4B
130	QC 2	1 pcs	11/29/19	0.00 0.00	QC 2 - 1
				QC 2 - 12	
				QC 2 - 14	
				QC 2 - 17	
				QC 2 - 19	
				QC 2 - 2	
				QC 2 - 20	
				QC 2 - 22	
				QC 2 - 23	
				QC 2 - 25	
				QC 2 - 32	
				QC 2 - 33	
				QC 2 - 35	
				QC 2 - 39	
				QC 2 - 4	
				QC 2 - 40	
				QC 2 - 44	
				QC 2 - 45	
				QC 2 - 48	
				QC 2 - 49	
				QC 2 - 50	
				QC 2 - 51	
				QC 2 - 52	
				QC 2 - 57	
				QC 2 - 62	
				QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 2 - 65	
				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
140	QC 8	1 pcs	11/29/19	0.00 0.00	QC 8 - 12
				QC 8 - 14	
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
				QC 8 - 44	
				QC 8 - 45	
				QC 8 - 49	
				QC 8 - 58	
				QC 8 - 8	
				QC 8 - 9	
				QC 8 - 68	
				QC 8 - 67	

DAS
662019/11/11
9-89

DAS
662019/11/19
9-89

					QC 8 - 1 (A)	
					QC 8 - 47	
					QC 8 - 40	
					QC 8 - 52	
					QC 8 - 23	
					QC 8 - 57	DAS
					QC 8 - 76	76
					QC 8 - 61	9-89
145 Crosstubes - 2 - B4B	1 pcs	11/29/19	0.00 0.36		Crosstubes - 1 - B4B	
					Crosstubes - 2 - B4B	BEB 11/30/2019
					Crosstubes - 3 - B4B	
					Crosstubes - 4 - B4B	
150 Crosstubes - 3 - B4B	1 pcs	11/29/19	0.00 0.40		Crosstubes - 1 - B4B	BEB 19-11-25
					Crosstubes - 2 - B4B	
					Crosstubes - 3 - B4B	
					Crosstubes - 4 - B4B	
160 QC 7	1 pcs	11/29/19	0.00 0.00		QC 7 - 10	
					QC 7 - 13	
					QC 7 - 14	
					QC 7 - 15	
					QC 7 - 17	
					QC 7 - 18	
					QC 7 - 19	
					QC 7 - 2	
					QC 7 - 28	
					QC 7 - 3	
					QC 7 - 30	
					QC 7 - 34	
					QC 7 - 36	
					QC 7 - 37	
					QC 7 - 41	
					QC 7 - 47	
					QC 7 - 48	
					QC 7 - 51	
					QC 7 - 58	
					QC 7 - 59	
					QC 7 - 60	
					QC 7 - 9	
					QC 7 - 68	
					QC 7 - 50	
					QC 7 - 67	
					QC 7 - 40	
					QC 7 - 24	
					QC 7 - 43	
					QC 7 - 61	
					QC 7 - 81	DAS
					QC 7 - 76	76
					QC 7 - 79	9-89
170 Packaging 3-1 - Stock - B4B	1 pcs	11/29/19	0.00 0.00		Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	

					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	B3 11/25/2019
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
180 QC 21 - SA	1 pcs	11/29/19	0.00 0.00		QC 21 - SA - 21	
					QC 21 - SA - 70	DAS 21 NOV 25 2019
					QC 21 - SA - 53	

Part Op 100 - 1- Fill tube with sand & install plugs 407-105 on both ends as per Folio FA249 2- Turn both side of tube 3- Turn first Descriptions: taper section on both side as per folio FA249
110 - (QC2- Inspect parts off machine FAI/FAIB)
120 - 1- Turn second taper on both side 4- Scribe part # and batch # using vibrating stylus on the cuff as per Dwg D407-667-145 5- Ultra sound the crosstube as per FAI. "wall thickness mesurment" at given location.
130 - (QC2- Inspect parts off machine FAI/FAIB)
140 - (QC8- Inspect parts - second check)
145 - GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.
150 - 1- handfinish X-TUBE INSIDE AND OUT
160 - (QC7-Inspect Chemical Conversion Coat)
170 - (Identify as per dwg & Stock Location:) LOCATION : LG014
180 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6010-115	Crosstube Material	1 pcs (1 ea)	100-Mori Seiki TL-40 - 1	F123475

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Mori Seiki TL-40 - 1	D6010-115	1	106	0

Part Specifications

Specifications could not be found.



Container No: S229883



Part: D407 - 667 - 105TRN

Job No: 202845

Serial No/Batch: S229883

Revision: 0

Inspector:

Exp Date:

Instructions:

Dart Aerospace Ltd.
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CANADA
TEL.: 1 813 832-6200
Email: sales@dartaero.com
www.dartaerospace.com

Plex 11/4/19 1:29 PM Dart.lajeunesse.marie

④

DART AEROSPACE LTD	Work Order:	202845
Description: Crosstube Assembly	Part Number:	D407-667-145
Inspection Dwg: D407-667-145 Rev: D		Page 1 of 2

FIRST ARTICLE INSPECTION CHECKLIST

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.240	+0.005/-0.000	2.240	✓		
	1.865	+0.005/-0.000	1.870	✓		
	1.878	+0.005/-0.000	1.883	✓		
	1.970	+0.005/-0.000	1.975	✓		
	2.030	+0.005/-0.000	2.034	✓		
	2.165	+0.005/-0.000	2.170	✓		
	0.125	+/-0.010	0.126	✓		
	R0.063	+/-0.010	0.063	✓		
	R0.500	+/-0.010	0.500	✓		
	R0.063	+/-0.010	0.063	✓		
	4.438	+/-0.030	4.438	✓		
SIDE B	2.240	+0.005/-0.000	2.240	✓		
	1.865	+0.005/-0.000	1.870	✓		
	1.878	+0.005/-0.000	1.883	✓		
	1.970	+0.005/-0.000	1.975	✓		
	2.030	+0.005/-0.000	2.034	✓		
	2.165	+0.005/-0.000	2.170	✓		
	0.125	+/-0.010	0.128	✓		
	R0.063	+/-0.010	0.063	✓		
	R0.500	+/-0.010	0.500	✓		
	R0.063	+/-0.010	0.063	✓		
	4.438	+/-0.030	4.445	✓		
	113.20	+/-0.020	113.20	✓		

Item	Qty	Part Number	Description
	-146		
1	X	D407-867-145	CROSSTUBE ASSEMBLY (407 HIGH FWD)
2	1	D8010-116	CROSSTUBE
3	2	D2873-D43	NUT PLATE
4	2	D2873-D45	NUT PLATE
5	2	D2891-1	SUPPORT
6	4	D3595-063-385	RUBBER CUSHION
7	4	MS21920-20	CLAMP (OR MS21920-21)
8	14	MS20601AD4W10	RVET (OR NAS9302B-4-10)
9	A/R	PROSEAL 880 B-2	SEALANT, AMS-S-8802 CLASS B-2
10	2	AN742D36	CLAMP
11	2	MS9165-05	ANGLE BRACKET
12	2	MS21042L3	NUT (OR MS21042-3)
13	2	MS27039-1-08	SCREW
14	4	NAS1149C0332R	WASHER (OR AN880C10L)



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 202845 MLS
19-11-04

GENERAL NOTES:

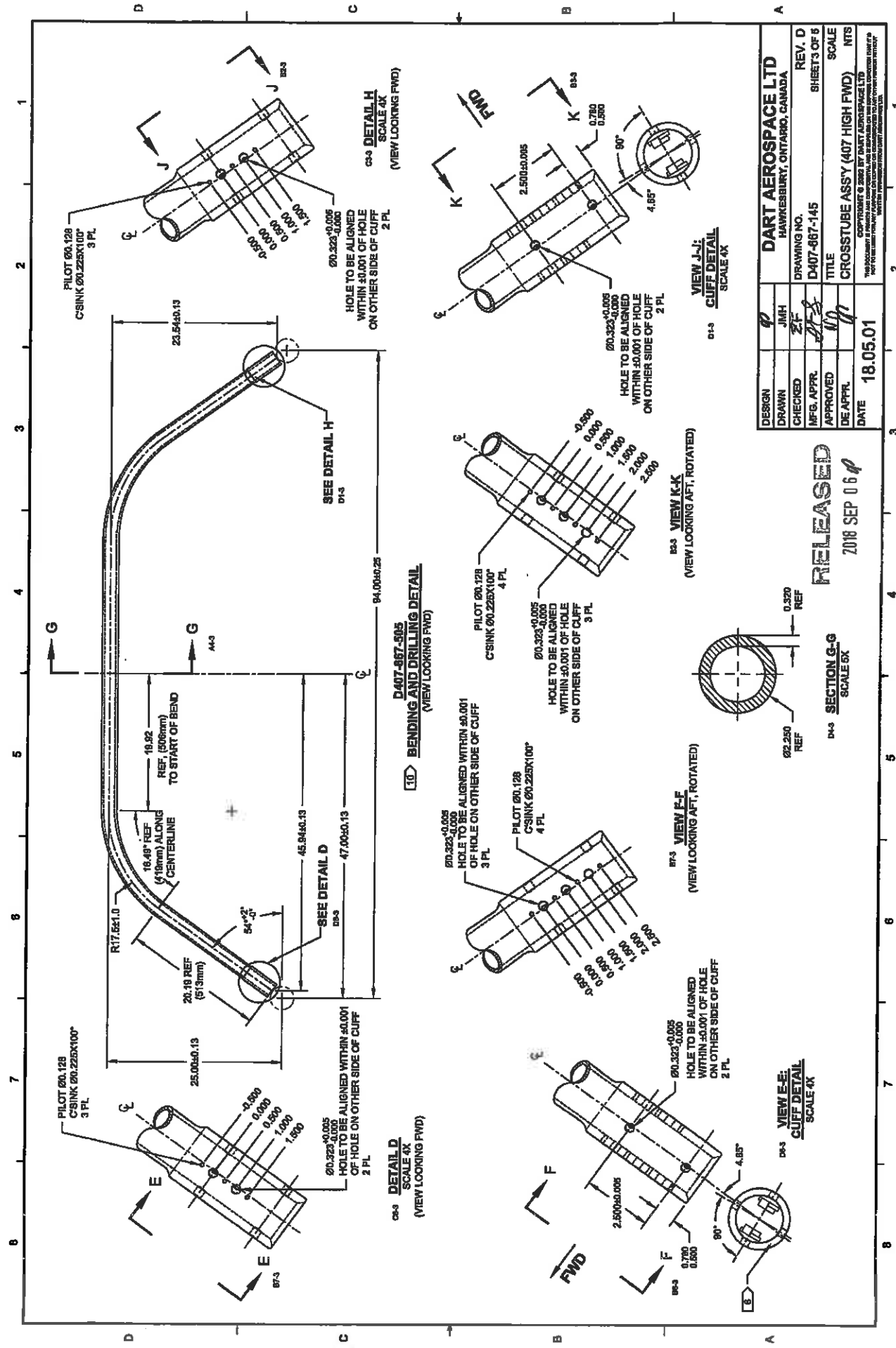
- 1) MATERIAL: MANUFACTURED FROM D8010-116
FINISHED LENGTH = 113.20±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SOURCE DART PART NUMBER "D407-867-145" AND BATCH NUMBER ON INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 17.8 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY.
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 5% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) TO INSTALL D2891-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE 0.04" TO 0.07" THICK LAYER OF PROSEAL 880 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 13) INSTALL MS21920-20 CLAMPS (OR -21) WITH D3595-063-385 RUBBER CUSHIONS TO SECURE THE D2891-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 880 SEALANT HAS CURED FOR 72 HOURS.
- 16) MASK AREA UNDER CLAMP PRIOR TO PAINTING.
- 17) SEAL EDGES WHERE AN742D36 CLAMP MEETS WITH THE CROSSTUBE USING SIKAFLEX-241/-281 OR MIL-S-8802 CLASS B2 OR PROSEAL 880 SEALANT.
- 18) PERFORM RESISTANCE CHECK TO ENSURE MAX RESISTANCE IS 10 MILLIONHMS.

RELEASED

2018 SEP 06

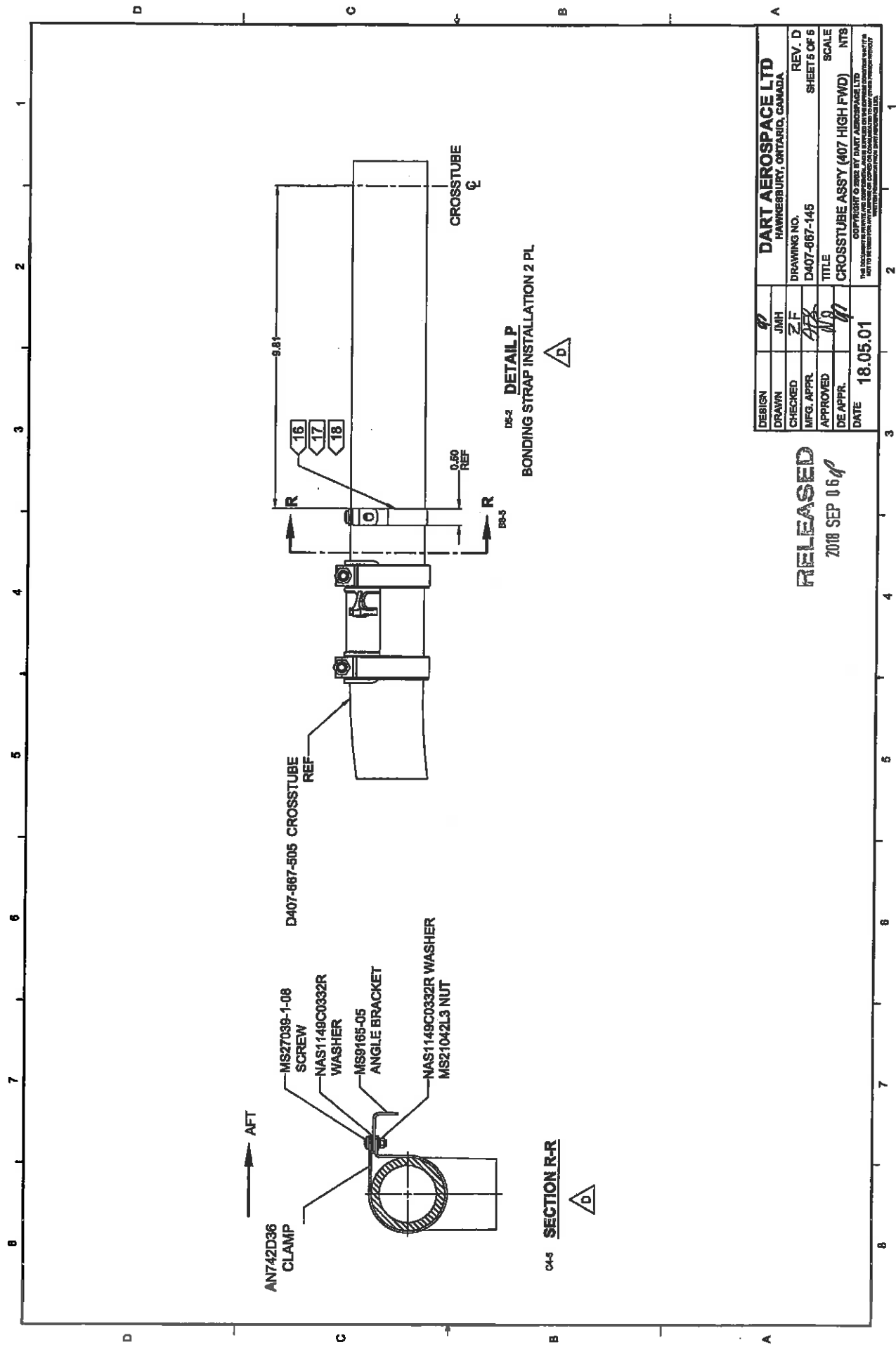
2018-09-07

D	REVISE SHEET 2 ASSEMBLY DETAIL HOLE PATTERN PER CARTB-221. UPDATE PARTS LIST AND GENERAL NOTES 12 & 15 TO INCORPORATE DED C-1. ADD ITEMS 10-14 TO PARTS LIST, ADD GENERAL NOTES 16-18 AND ADD SHEET 5 TO INCORPORATE DED C-2.	JMH	18.05.01
C	REVISE GENERAL NOTESPART LIST (2N D7-1): REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS. D3595-063-385 WAS D2656-400-484 (2N D6-2 & A5-2); REMOVED REF. 7 ADD TOLERANCES (2N C5-3, C4-3, D2-3); RELOCATED FLAG #9 (2N A5-3) PER NCR 210; MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4.	RF	08.11.06
B	ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHTDA SKIDTUBES	PH	05.07.26
A	NEW ISSUE	CP	02.05.03
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN	JMH		
CHECKED	ZF		
MFG. APPL.	AFB		
APPROVED	NO		
DE APPL.			
DATE	18.05.01		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV. D SHEET 1 OF 5 SCALE NTS	
CROSSTUBE ASSY (407 HIGH FWD)		CROSSTUBE ASSY (407 HIGH FWD)	
18.05.01		18.05.01	



ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 08-22-2011 BY 60322
UCBAW

2018 SEP 06 



DESIGN	40	DART AEROSPACE LTD
DRAWN	JMH	HAWKESBURY, ONTARIO, CANADA
CHECKED	Z F	DRAWING NO.
MFG. APPR.	M. J.	D407-587-145
DE APPR.	M. J.	TITLE
DATE	18.05.01	CROSSTUBE ASSY (407 HIGH FWD)
		SCALE
		NTS

RELEASED
2018 SEP 06 40

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Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE



Route update only ☐

NCR No. _____

Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐		DEPARTMENT/PROCESS Cross tube ☐ Small Fab ☐ Finishing ☐ Skid-tube ☐ Machining ☐ Large Fab ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐																																																																																			
Date :	Sequence #:	QTY Affected :		MRB (QS1042)																																																																																			
Description Work Order Deviation				Disposition																																																																																			
Root Cause <table><tr><td>Operator</td><td></td></tr><tr><td>Manufacturing Process</td><td></td></tr><tr><td>Equip/Tooling</td><td></td></tr><tr><td>Handling/Presservation</td><td></td></tr><tr><td>Material</td><td></td></tr><tr><td>Product Improvement</td><td></td></tr><tr><td>Process Improvement</td><td></td></tr><tr><td>Human Factors</td><td></td></tr></table>				Operator		Manufacturing Process		Equip/Tooling		Handling/Presservation		Material		Product Improvement		Process Improvement		Human Factors		FAULT CATEGORY <table><tr><td>Pressure/Forced</td><td></td><td>Contamination</td><td></td><td>Power Loss/Surge</td><td></td><td>Positioned Wrong</td><td></td></tr><tr><td>Bending</td><td></td><td>Misaligned/off center</td><td></td><td>Folio/Program</td><td></td><td>Outside Tolerance</td><td></td></tr><tr><td>Crushing</td><td></td><td>BOM/Route</td><td></td><td>Grain Direction</td><td></td><td>Drawing</td><td></td></tr><tr><td>Cracks</td><td></td><td>Broken/Damage/Defect</td><td></td><td>Weld</td><td></td><td>Finish</td><td></td></tr><tr><td>Crimp/Kink/Ripple/Wave/Twist</td><td></td><td>Incomplete/Unclear Instructions</td><td></td><td>Wrong Stock Pulled</td><td></td><td>Part Lost/Missing</td><td></td></tr><tr><td>Marks/Chatter</td><td></td><td>Drill Holes</td><td></td><td>Out of Sequence</td><td></td><td>Misread</td><td></td></tr><tr><td>Mislabeled</td><td></td><td>Fit/Function</td><td></td><td>Off-set/Set-up</td><td></td><td></td><td></td></tr><tr><td colspan="4">Other/Details:</td><td colspan="4"></td></tr></table>				Pressure/Forced		Contamination		Power Loss/Surge		Positioned Wrong		Bending		Misaligned/off center		Folio/Program		Outside Tolerance		Crushing		BOM/Route		Grain Direction		Drawing		Cracks		Broken/Damage/Defect		Weld		Finish		Crimp/Kink/Ripple/Wave/Twist		Incomplete/Unclear Instructions		Wrong Stock Pulled		Part Lost/Missing		Marks/Chatter		Drill Holes		Out of Sequence		Misread		Mislabeled		Fit/Function		Off-set/Set-up				Other/Details:							
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Completed By				Lead hand / Supervisor																																																																																			
QC / QA Coordinator																																																																																							